


# COUNTY OF YORK

## MEMORANDUM

**DATE:** January 31, 2006 (BOS Mtg. 2/21/06)

**TO:** York County Board of Supervisors

**FROM:** James O. McReynolds, County Administrator 

**SUBJECT:** Application No. UP-693-06, Dominion Virginia Power

### **ISSUE**

This application is a request, pursuant to Section 24.1-115(d)(3) of the York County Zoning Ordinance, to authorize a major expansion of a conforming electric substation on a 3.08-acre parcel located at 441 Waller Mill Road (Route 713) approximately 1,520 feet north of the intersection of Waller Mill Road and Plantation Drive (Route 789) and further identified as Assessor's Parcel No. 6-18.

### **DESCRIPTION**

- Property Owner: Virginia Electric and Power Company
- Location: 441 Waller Mill Road (Route 713)
- Area: 3.08 acres
- Frontage: Approximately 475' on Waller Mill Road
- Utilities: Public water is available; sanitary sewer is not.
- Topography: Relatively flat
- 2025 Land Use Map Designation: Medium Density Residential
- Zoning Classification: R20 (Medium-density single family residential)
- Existing Development: Electric substation and power transmission lines
- Surrounding Development:
  - North: Single-family detached home
  - East: None
  - South: None
  - West: None
- Proposed Development: Expansion of fenced compound area to include installation of two circuit breakers and associated structures and equipment

## **CONSIDERATIONS/CONCLUSIONS**

1. This application seeks to expand and upgrade the Dominion Virginia Power Waller Substation located at 441 Waller Mill Road through the installation of additional circuit breakers and associated equipment that will require the fenced area of the substation to be enlarged by 67%. The property is zoned R20, and since electric substations require a Special Use Permit in the R20 district, the substation is considered a conforming Special Use. Any expansion greater than 25% is considered a major amendment requiring approval by the Board, including Planning Commission review and public hearings.
2. The purpose of the proposed breaker installation is to split two existing 230,000-volt transmission lines that run from the Yorktown Power Station to substations in New Kent and Charles City Counties and serve much of the Williamsburg area and areas to the north and west. A power failure on either line would result in a loss of several power transformers along the corridor and would affect thousands of customers. Installation of the breakers will split each transmission line into two lines, reducing the number of customers affected by a single line failure. Specific equipment to be installed includes the two circuit breakers and associated equipment to support them, one new concrete and steel backbone structure approximately 45' in height, steel bus supports and aluminum bus (also known as a bus bar, which is a conducting bar that carries heavy current to supply several electric circuits) approximately 27' in height, and a new prefabricated control building (20' by 20') identical to the existing building. The new building is needed because of a lack of space in the existing structure and the need to keep the transmission controls separate from the distribution controls.
3. The subject property is designated for Medium Density Residential development in the Comprehensive Plan and is zoned R20 (Medium-density single family residential). Development in the surrounding area is sparse; to the east of the subject parcel is an approximately 400-acre undeveloped parcel owned by the Colonial Williamsburg Foundation. To the west, across Waller Mill Road, is undeveloped watershed property owned by the City of Williamsburg. A single-family detached home to the north is the only development adjacent to the substation property. The house is approximately 240' from the existing fenced area and will be approximately 170' from the expanded fenced area if this application is approved. The area of the proposed expansion is within Dominion Virginia Power's 200' transmission right-of-way, which follows the northern property boundary and traverses the parcel on which the adjacent home sits.
4. There is currently no landscaping on the parcel. To screen views of the substation from adjacent properties and from Waller Mill Road, the applicant plans to install landscaping around the perimeter of the site. The concept plan submitted by the applicant depicts a total of 147 evergreen shrubs and/or trees surrounding the existing and proposed fenced area. I have proposed a condition of approval to ensure that the entire site is properly landscaped if this application is approved.

5. Since the substation is unmanned, the only traffic it generates consists of periodic inspections and maintenance trips. The proposed expansion, therefore, will not result in any increased traffic.
6. The proposed work involves existing transmission lines and will not increase human exposure to electromagnetic fields. Furthermore, it should be noted that in a study dated October 31, 2000, the Virginia Department of Health determined that there is no conclusive and convincing evidence that exposure to electromagnetic fields emanating from nearby high-voltage transmission lines increases the risk of cancer or has any other detrimental health effects on humans.

### **PLANNING COMMISSION RECOMMENDATION**

The Planning Commission considered this application at its January 11 meeting and, subsequent to conducting a public hearing at which only the applicant's representative spoke, voted 6:0, with Mr. Abel abstaining, to recommend approval.

### **COUNTY ADMINISTRATOR RECOMMENDATION**

I am of the opinion that the proposed expansion will improve the reliability of electric service for County residents and businesses with no adverse impacts on the surrounding area, which is almost entirely undeveloped. Electric substations by their nature have an industrial appearance that is not particularly attractive; however, the proposed landscaping around the perimeter of the facility will enhance the overall appearance of the site. The landscaping will not, of course, block views of the taller structures that are proposed, but the location of the proposed expansion is within a 200' transmission line right-of-way that already contains several similar structures of equal or greater height, so the visual impact should not be significant. Therefore, based on the considerations and conclusions as noted, I recommend that the Board approve this application subject to the conditions contained in proposed Resolution R06-17.

Carter/3337:TCC

Attachments

- Excerpts of Planning Commission Minutes, January 11, 2006
- Zoning Map
- Vicinity Map
- Aerial Photo
- Concept Plan
- Project Narrative submitted by the applicant
- Proposed Resolution R06-17